

DATE: February 23, 1995

TO: All OWP Engineering Staff

THROUGH: Eric H. Bartsch, P.E., Director
Office of Water Programs

Allen R. Hammer, P.E., Director
Division of Water Supply Engineering

C. M. Sawyer, P.E., Director
Division of Wastewater Engineering

FROM: C. W. Swanson, P.E., Field Services Engineer
Division of Wastewater Engineering

SUBJECT: Water and Sewerage - Information - Inspections
Confined Space Entry

The author attended a Virginia Rural Water sponsored training session on "Confined Space Entry and Safety" on February 8, 1995. This subject deals with Occupational Safety and Health Standard 1910.146 effective as of April 15, 1993.

In a nutshell a confined space has all three of the following:

- 1) Is large enough for a person to enter and perform assigned work.
- 2) Has entry and exits that may be limited in size or number.
- 3) Is not designed for continuous occupancy.

An entry permit to enter a confined space is needed if the confined space as defined above also has any one of the following characteristics:

- 1) Contains or has potential to contain a hazardous atmosphere.
- 2) Contains a material with potential for engulfment.
- 3) Has the potential to trap or asphyxiate.

- 4) Contains any other recognized safety or health hazard.
- 5) Is any open surface tank deeper than 4 feet.

Most manholes, vaults, tanks, pits, etc. are permit required confined spaces. If the vault, etc. is more than 4 feet deep OSHA requires that if any part of your body breaks the plane of the opening then an entry permit is needed.

Generally speaking an entry permit will require that gas monitoring readings for oxygen, toxic gases and combustibles be collected. In addition the person who enters (entrant) will wear a harness and be attached to a mechanically assisted retrieval mechanism such as a lifting winch, mounted on a tripod. The retrieval mechanism must be rated for 5,000 pounds lifting capacity. A second person called the attendant is required at the entry point who is in constant communication with the entrant. All electrical and mechanical devices are tagged and "locked out" for example, pumps, motors, and electrical panel boxes. The gas readings are collected before the lid or cover is opened (around the cover) and then continuously by the entrant while working in the permit required confined space.

The Office of Water Programs (OWP) directs that Virginia Department of Health (VDH) personnel conducting wastewater or water inspections are to comply with permit requirements for confined space entry procedures.

Enclosed is an example program used and developed by Virginia American Water Company in Hopewell, Virginia for our staff use only. Also enclosed is a sample confined space entry permit used by Virginia American Water Company.

Enclosures